

DEMEKHIN, A.P.; ABOYAN, V.Kh.

*Declassified*  
*1983*

Mineral springs of the Vokhchi and Megri-get Basins. Izv. AN Arm.  
SSR. Ser. FIET nauk 1, no. 1:39-52 '48. (MLRA 9:8)

1. Institut geologicheskikh nauk AN Armyanskoy SSR.  
(Vokhchi Valley--Mineral waters)  
(Megri-get Valley--Mineral waters)

SHUYAYEV, A.T.; DEMEKHIN, V.F.

Determining the number of 3d-electrons in transition metals.  
Fiz. met. i metalloved. 12 no.6:912-913 D '61. (MIRA 16:11)

1. Rostovski gosudarstvennyy universitet.

SHUVAYEV, A.T.; DEMEKHIN, V.F.

Investigation of the absorption K-spectra of calcium in some  
compounds. Izv. AN SSSR. Ser. fiz. 25 no.8:992-993 Ag '61.  
(MIRA 14:8)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.  
(Calcium--Spectra)

S/048/62/026/003/014/015  
B102/B104

AUTHORS: Blokhin, M. A., Demekhin, V. F., and Shveytser, I. G.

TITLE: Correction of the X-ray emission spectrum for self-absorption

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 3, 1962, 419 - 422

TEXT: Corrections for self-absorption are considered for the continuous and the characteristic spectrum separately. In the first case, it is not necessary to know the absolute values of the absorption coefficients. In the second case, the intensity of the characteristic spectrum can be given by  $I = A e^{-C_1 \tau} [C_2 + C_3 \tau]$  with

$$C_1 = \frac{x}{\sin \psi} \frac{v^2}{v^2 - v_1^2}, \quad C_2 = \frac{v - v_1}{v_1} - \lg \frac{v}{v_1}, \quad C_3 = \frac{x}{\sin \psi} \frac{2v^2 - 3v^2 v_1 + v_1^3}{6v_1(v^2 - v_1^2)}. \quad (5),$$

where  $x$  is the maximum penetration depth of electrons, and  $\tau$  is the absorption coefficient. A practical correction for self-absorption is demonstrated for the  $L_{\beta_2}$  band and the  $L_{III}$  spectrum of metallic Mo. The intensities

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Correction of the ...

S/048/62/026/003/014/015  
B102/B104

with and without absorber ( $I$  and  $I_0$ ) were measured. The scattered background itself was also measured with and without absorber ( $I_b$  and  $I_{b0}$ ), allowing for the cosmic background intensity  $I_c$ . Then  $\tau = 2.3 \frac{x}{m} \log \left[ \frac{(I_0 - I_{b0} - I_c)}{(I - I_b - I_c)} \right]$ . For a particular case  $x = 0.04 \mu$  was obtained;  $I_0 = I \cdot 0.53 / e^{-2.6 \cdot 10^{-5} \tau (1 + 7.8 \cdot 10^{-6} \tau)}$ . The effect of voltage on self-absorption was studied at 3.5, 5.5, and 12 kv. The self-absorption of the characteristic spectrum increases with increasing voltage while that of the continuous spectrum decreases. Since, however, the intensity of the former spectrum rises with increasing voltage more rapidly than that of the latter, it depends on geometry if the self-absorption of the continuous spectrum increases or decreases. There are 2 figures and 6 references: 4 Soviet and 2 non-Soviet.

ASSOCIATION: Rostovskiy gos. universitet (Rostov State University)

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ACCESSION NR: AP4038771

determine whether the K absorption of the silicon in the diffracting crystal would distort the spectrum in the  $K\beta_x$  region; no such distortion was observed. A dry run was made with an aluminum sample held with the same cement as was used in the investigation proper; no lines were found in the region of interest. The presence of phosphorus in the silicon crystal produced no observable change in the spectrum. The experimental error in these measurements was  $\pm 0.07$  eV for position,  $\pm 0.03$  eV for line widths, and 2% for relative intensities. The width of both the  $K\alpha_1$  and the  $K\alpha_2$  line, corrected for instrumental broadening, was  $0.45 \pm 0.05$  eV, and their separation was 0.56 eV. The shifts due to chemical bonding of the  $K\alpha_1$  line, as well as those of the  $\alpha_4$ ,  $\alpha_3$ ,  $\alpha'_3$  and  $\alpha'$  satellites, agreed with the values obtained by N.G. Johnson (Diss. Lund, 1939) and H. Karlsson-Flenberg (Z. Phys. 96, 167, 1935). When the charge on the silicon ion increased, the satellites shifted approximately twice as far as the  $K\alpha_1$  line, and the intensities relative to  $K\alpha_1$  of the  $\alpha_4$  and  $\alpha'$  satellites increased and those of  $\alpha_3$  and  $\alpha'_3$  decreased. This behavior is discussed in terms of the charge between the K and L shells due to the valence electrons. The shape of the  $K\beta_x$  band agreed well with that reported by Fogel' (loc. cit.). Fine structure was perceptible in the  $K\beta_x$  line. The  $K\beta_1$  line was observed in pure silicon under conditions that are said to preclude its being due to the presence of  $SiO_2$ . The  $K\beta$  bands of Si and C in SiC and of Si in the pure crystal were found to be very si-

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milar. From this it is concluded that the distribution of electrons in the valence bands of these substances is determined mainly by the lattice, which has the diamond structure in both cases. Orig. art. has: 4 figures and 1 table.

ASSOCIATION: Rostovskiy-na-Donu gosudarstvennyy universitet (Rostov-on-the-Don State University)

SUBMITTED: 00

DATE ACQ: 12Jun64

ENCL: 00

SUB CODE: OP

NR REF SOV: 003

OTHER: 008

Card 3/3

ACCESSION NR: AP4038774

S/0048/64/028/005/0834/0835

AUTHOR: Blokhin, M.A.; Demekhin, V.F.; Shveytser, I.G.

TITLE: L Spectra of some molybdenum compounds /Report, Seventh Conference on X-Ray Spectroscopy held in Yerevan 23 Sep to 1 Oct 1963/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.5, 1964, 834-835

TOPIC TAGS: x-ray spectrum, x-ray absorption, molybdenum, molybdenum compound, chemical bond

ABSTRACT: In order to obtain information concerning the extent to which electrons in the incomplete 4d shell of transition metals participate in chemical bonding, the L<sub>II</sub> and L<sub>III</sub> absorption spectra and the I $\beta$ <sub>2</sub> emission bands of metallic molybdenum, and Mo in MoO<sub>3</sub>, CaMoO<sub>4</sub> and MoS<sub>2</sub> were recorded. Although some of these spectra have been previously reported, the results of different workers are not all in agreement; moreover, the earlier spectra were not corrected for the width of the inner level. The spectra were recorded photographically with a spectrometer having a resolution of 12 000, and the L<sub>III</sub> edge was observed with a second instrument having half this resolving power and employing an ionization chamber for recording. The ob-

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ACCESSION NR: AP4038774

served spectra were corrected for the width of the inner level, the width of the Mo L<sub>III</sub> level being assumed to be 1.76 eV. The corrected absorption curve for metallic Mo did not break sharply; this indicates that the L<sub>III</sub> level is in fact somewhat wider than assumed. A gap between the emission and absorption was perceptible in the insulators MoO<sub>3</sub> and CaMoO<sub>4</sub>. The L<sub>III</sub> spectra were in good agreement with those obtained by I.V.Borovskiy, K.P.Gurov, et al (Izv.AN SSSR, Ser.fiz.21,1401,1957). As the valence increased, the absorption edge shifted toward shorter wavelengths. This shift, which attained 3.4 eV for the L<sub>III</sub> edge of CaMoO<sub>4</sub>, is ascribed to decreased shielding of the inner portion of the atom by the valence electrons that become involved in chemical bonds. A second sharp absorption line was observed in the L<sub>III</sub> spectrum of CaMoO<sub>4</sub> at 13 eV from the primary line. Such lines have been previously observed in molybdenum compounds and are ascribed to transitions of 2p electrons to the incomplete 4d shell. Orig.art.has: 3 figures and 1 table.

ASSOCIATION: Rostovskiy-na-Donu gosudarstvennyy universitet (Rostov-on-the-Don State University)

SUBMITTED: 00

DATE ACQ: 12Jun64

ENCL: 00

SUB CODE: OP

NR REF SOV: 008

OTHER:000

Card 2/2

L 88Q9-66 EWT(1)/EWT(m)/EWP(j)/T/EWT(m)-2 IJP(c) RM/LHB  
 ACC NR: AP5024696 SOURCE CODE: UR/0056/65/049/003/0765/0769  
 AUTHOR: <sup>44, 55</sup> Sachenko, V. P.; <sup>44, 55</sup> Demekhin, V. F.  
 ORG: Rostov-on-Don State University (Rostovskiy-na-domu gosudarstvennyy universitet)  
 TITLE: <sup>44, 55</sup> Satellites of x-ray spectra  
 SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 3, 1965, 765-769  
 TOPIC TAGS: <sup>21, 44, 55</sup> x ray spectrum, <sup>21, 44, 55</sup> spectral line, ionization phenomenon, electron interaction, satellite, photon scattering, nonradiative transition, chemical bonding  
 ABSTRACT: To obtain information on the ionization mechanism of the inner shells of atoms and on the behavior of electrons in a solid, the authors studied the properties of some types of satellites and their nature. The study is based on the concept of auto-ionization of the atom when the number of inner electron changes, and leads to a single mechanism for the appearance of multiply ionized atoms excited by either electrons or photons. The method is based on the fact that a change in the number of electrons produces a sudden perturbation of the potential of the remaining electrons. The calculated intensities of the x-ray K $\alpha$  and some KB satellites are in agreement with the experimental data. It is shown that nonradiative transitions influence greatly the relative intensity of the KL<sub>I</sub> and KL<sub>II III</sub> satellites. The effect of the chemical bonding on the satellite intensity is considered. Authors thank R. V. Vedrinskiy for a number of valuable remarks and a discussion. Orig. art. has: 1 figure and 7 formulas.  
 SUB CODE: 20/ SUBM DATE: 28Oct64/ ORIG REF: 004/ OTH REF: 008  
 Card 1/1 JW

L 14493-65 EWT(m) DIAAP/AFWL/SSD/ESD(t)

ACCESSION NR: AP4048636

S/0048/64/028/010/1657/1663

AUTHOR: Vartapetyan, G.A.; Garibyan, T.A.; Demekhina, N.A.; Muradyan, E.G.; Khudaver-  
dyan, A.G. 6

TITLE: Properties of the levels and radiations of the odd-A nuclei <sup>131</sup>Cs and <sup>133</sup>Cs  
Report, Fourteenth Annual Conference on Nuclear Spectroscopy held in Tbilisi 14-22  
Feb 1964 19

SOURCE: AN SSSR. Izv. Seriya fizicheskaya, v.28, no.10, 1964, 1657-1663

TOPIC TAGS: nuclear physics, nuclear radiation, nuclear structure, gamma emission

ABSTRACT: Delayed  $\gamma$ -coincidence measurements were performed with <sup>131</sup>Cs (and in one case with <sup>133</sup>Cs) in order to obtain information concerning the nature of the excited states and the extent to which they involve collective motions. KI crystals were used in a delayed coincidence circuit with a resolving time of  $10^{-8}$  sec. The performance of the circuit was checked by observing prompt coincidences from <sup>60</sup>Co. With the aid of the known different lifetimes of the 124 and 133 keV <sup>131</sup>Cs levels, it was determined from the delayed coincidence measurement results that the 1039 keV level decays almost 15 times more frequently to the 124 keV level than to the

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ACCESSION NR: AP4048636

133 keV level. This contradicts conclusions drawn from the model of L.W. Person and I.O. Rasmussen (Nucl. Phys. 36, 166, 1962). The half-life of the 620 keV  $\text{Cs}^{131}$  state was measured by triple KX30- $\gamma$ 495- $\gamma$ 124 coincidences, and that of the 438 keV  $\text{Cs}^{133}$  state was measured by a similar method. Both half-lives were found to be less than  $1.5 \times 10^{-10}$  sec. The half-life of the 1039 keV  $\text{Cs}^{131}$  state was found by delayed KX30- $\gamma$ 1039 coincidences to be less than  $2 \times 10^{-9}$  sec. The half-life of the 133 keV  $\text{Cs}^{131}$  state was found to be  $13.5 \times 10^{-9}$  sec; this is in agreement with the finding of E. Bodenstedt et al (Nucl. Phys. 20, 557, 1960). The angular correlation of the 495 and 124 keV  $\gamma$ -rays of  $\text{Cs}^{131}$  was examined and an anisotropy of the order of 0.01 was found. It is concluded that the decay of the 124 keV level is 97% by M1 transition and 3% by E2. The ratio of the reduced E2 width to the theoretical value for a single-particle state was found to be greater than 4.5 for the 356 keV  $\text{Cs}^{133}$  state, greater than unity for the 495 keV  $\text{Cs}^{131}$  state, and approximately 6 for the 133 keV  $\text{Cs}^{131}$  state. These estimates are in satisfactory agreement with calculations of R. Sorensen (Phys. Rev. 133, B281, 1964) in which nucleon pairing and collective vibrations were taken into account. The significance of these findings for models of odd-A nuclei is discussed. "In conclusion the authors express their gratitude to A.I. Alikhanyan for his interest in the work." Orig. art. has: 2 formulas, 4 figures and 3 tables.

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L 1444-65

ACCESSION NR: AP:4048636

ASSOCIATION: Fizicheskiy institut Gosudarstvennogo komiteta po ispol'zovaniyu atom-  
noy energii SSSR (Physics Institute, State Committee on the Uses of Atomic Energy,  
SSSR)

SUBMITTED: 00

ENCL: 00

SUB CODE: NP

NR REF SOV: 005

OTHER: 020

3/3

DEMYKHINA, T.A.

"Diseases of Sprouts of Hemp and Control Measures," in Best Crops, Hemp, Keanf, Abutilon, Ramie, Jute and Okra, State Publishers of Agricultural Literature, Moscow, 1950, pp. 100-107. 73 V96

So: SIRA S1-90-53, 15 Dec 1953

USSR / General and Specialized Zoology - Insects.

P

Abs Jour : Ref Zhur - Biologiya, No 5, 1959, No. 20893

Author : Demekhina, T. A.

Inst : Not given

Title : Protection of Hemp from Soil Pests

Orig Pub : Zashchita rast. ot vredit. i bolezney, 1958,  
No 2, 60

Abstract : The testing of 12% hexachlorocyclohexane in the Sumskaya Oblast' against the grubs of the May beetle and click beetles. The first version - introduction during cultivation prior to sowing (120 kg/ha), and the 2nd version - the dusting of the seeds (1.5 kg/centner). From 540 seeds sowed on 1 m<sup>2</sup>, the following germinated: in the 1st version, 56.1%; in the 2nd, 61.3%; in the

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L 22001-66 EWT(m)/EMP(v)/EWP(j)/T/ETC(m)-6 IJP(c) WW/RM

ACCESSION NR: AP5024505

UR/0191/65/000/010/0035/0036

678.643'42'5.01:539.612:666.189.211

AUTHOR: Golubenkova, L. I.; Demekhina, Ye. M.

TITLE: Adhesion of epoxy resins to glass cloth

SOURCE: Plasticheskiye massy, no. 10, 1965, 35-36

TOPIC TAGS: fiberglass, glass cloth, adhesion, epoxy plastic, heat resistance, resin/ED-5 resin, TS 8-3-250 glass cloth

ABSTRACT: The adhesion of epoxy resins to glass cloth was examined in this study using ED-5 resin and TS 8/3-250 glass cloth lubricated with paraffin. Adhesion of the resin to the cloth depends on curing conditions and the amount of curing agent in the adhesive. The resin-glass bonding was stronger with elevated temperature cures (160C for 1 hour) than with a 24 hour room temperature cure. Curing of the epoxy predominated as the amount of polyethylenepolyamine curing agent was increased from 8 to 15% on the weight of the resin. Reaction between the epoxide group and the surface of the glass cloth was enhanced and bond strength was increased as the amount of curing agent was reduced to about 4%.

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51  
49  
B



L 22001-66

ACCESSION NR: AP5024505

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Below this the cohesive strength of the resin is reduced, leading to rupture. Tests were run using ED-5 with different amount of resin DEG-1 based on diethylene glycol and epichlorohydrin, using triethanolamine titanate as the curing agent. Resin-glass bond strength increased as DEG-1 was increased to 50%. However, the strength of the fiberglass subjected to static flex testing decreased as the amount of DEG-1 was increased. Preliminary coating of glass cloth with resin with subsequent application of a second coat of resin reduced the strength of the fiberglass in comparison to fiberglass made by the customary one-application method. The increase in the heat resistance of fiberglass based on epoxy resins is associated with the reaction of the resin with the glass surface. Orig. art. has 3 figures

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: //

NR REF SOV: 008

OTHER: 008

Page 2/2 BK

DEMEC, E.

Basic principles in the manufacture of bin products with a

quantity of orange juice in a ratio of 1 to 1. The amount of  
this juice, covers the daily vitamin C requirement of one  
person. E. L. C.

SPANYAR, Pal; KEVEI, Janosne; BLAZOVICH, Marta; DEMEL, Ervinne; KUTZ,  
Vaszilijne

Requirements for preserving vitamin C in fruit juices and  
refreshing drinks. Konzerv paprika no.6:189-193 N-D '62.

1. Kozponti Elelmiszeripari Kutato Intezet.

47. Quantitative analysis of ascorbic and dehydro-ascorbic acid in the presence of reductones - *Aszkorbinsav és dehidroaszkorbinsav meghatározása redukálószerek jelenlétében* - P. Szanyás, M. Kézai and I. Tóth. (Hungarian Journal of Chemistry - *Magyar Kémiai Folyóirat* - Vol. 39, 1953, No. 5, pp. 143-148, 6 figs., 2 tabs.)

The total reducing power of ascorbic acid and of reductones was determined by the Schueck  $\alpha, \alpha'$ -dipyridyl method. In order to determine the reducing power of reductones first the reductive effect of ascorbic acid must be done away with. An extract made with glacial acetic acid to which ammonium acetate is added. At pH 3 and 40° C the destruction of ascorbic acid takes place within two hours. In the presence of the destroyed ascorbic acid the reductive power of the reductones could also be determined by the Schueck  $\alpha, \alpha'$ -dipyridyl method. The real ascorbic acid content corresponds to the difference between the values obtained by the original  $\alpha, \alpha'$ -dipyridyl method and

the modified method. The real quantity of dehydro-ascorbic acid is also determined in two steps. The total amount of dehydroascorbic acid and of the interfering substances can be determined by the Roe 2,4-dinitrophenylhydrazine method. If the material to be investigated is allowed to stand in an alkaline medium at pH 10.4 for 30 minutes at a temperature of 30° C the dehydroascorbic acid will decompose while the interfering substances remain unchanged. The true value of dehydroascorbic acid is obtained if these substances are determined by the Roe method, the results are expressed in terms of dehydro-ascorbic acid and this value deducted from that arrived at by the original method.

P. S.

Demel, Jack WIGA

	FILE I BOOK EXPLOITATION	PUL/AGS
	Math Engineering, Electricity, Pt. 2 (Low-Capacity Power, Engineering; Bulletin, No. 2).	
	Maths Engineering, Machine Design, Mechanicals, Book, Engineering & Physics,	
	1968. Vol. 9, 3,000 copies printed.	
	No editors mentioned.	
	PREFACE: This bulletin is intended for power engineers and technicians specializing in the development of low-capacity natural resources and for users of such power resources for local agricultural and industrial applications.	
	CONTENTS: This collection of articles is devoted to the problems of the utilization for local consumption of regional power resources other than coal and oil. Such energy resources include water, wind, sun, tide, natural and waste power, geysers, shale, hot springs and others less known or as yet undeveloped. The study of such resources and of their use is presented in a series of articles by Soviet scientists and experienced in Poland and other countries. There is a special bibliography, survey of non-Soviet and non-Polish sources material, at the end of the book. No personalities are mentioned.	
	Wladimir Zolotarev, Master of Engineering, Warsaw, Factor in the Service of the Electrification of Agriculture	b8
	The author points to the necessity of utilizing available hydroelectric power for power for electric drive of small rural areas where no economic reason there is no publicly available power supply.	
	Lodovico Jozzini, Master of Engineering, Krakow, Micro-Elasticity	53
	The author deals with the utilization of water power in mountainous and semi-mountainous forests and health resorts, farms, settlements, small local industries, etc. He gives examples of existing micro-hydroelectric power plants with up to 35-hp capacity.	
	Vladimir Polichuk, Master of Engineering, Warsaw, Cooperation of Wind and Water Power	57
	The author describes a system of small hydroelectric power plants supplemented by a system of windmills and solar electric plants. The latter play an auxiliary role in pumping storage water. Such plant operation solves local problems of electrification, water supply, irrigation, etc.	
	Kenneth Jackson, Master of Engineering, Exeter, Calculation and Design of Wind Motors	60
	The author gives detailed illustrated instructions to non-specialists who intend to design wind motors for their own use.	
	Robertson, Jerry, Engineer, Soviet State Standard for Wind Motors	85
	This is an illustrated translation of GOST 2656-55	
	Rosenfeld, A.M., Professor, Where and How to Install a Wind-Motor (on the basis of the book by A.V. Kuznetsov)	93
	The article deals with the methods of finding wind velocity and gives a scale of velocities.	
	Dmitri Jakobov, Master of Engineering, Information Section	99
	Mikhail Stetslavsky and Leonid Vlasovskiy, Improvement of a New Type Wind Motor	99
	The authors describe the improvements which they presented to the Patent Office.	
	Georgy Ivan, Czechoslovakia, Automation of a Small Hydroelectric Power Plant with an Automatic Governor Without Speed Regulation	102
	Plant in question is the automation of a 70-hp hydroelectric power plant in the area of the river Sava. The authors and will be published in the next issue of the Bulletin.	
	Characteristics of Automobile Generators	103
	Nikolayev, Sergei, Engineer, Bibliography on the Subject of Utilization of Wind Energy, Part II	106
	Aleksandrov, Jerry, Engineer, See Publications on the Subject of Utilization of Wind Energy	130
	PAIDERS: Library of Congress	
	Date 6/6	

DETEL, Josef.

Pains of the upper extremity. Polski przegl.chir. 27 no.10:  
971-976 Oct. '55.

1. Z Chirurgicznego oddzialu Szpitala w Ostrawie I. Kierownik:  
doc. dr Genstmir Vohnout Ostrava, I. chirurg.oddel.  
(ARM, diseases,  
pain)

DEMEL, Josef, MUDr

Proposal for a suitable modification of gastric clips. Rozhl.chir.  
34 no.6:375-377 June 55.

1, Z chirurgického oddeleni OUNZ Ostrava I. prednosta doc. Dr.  
Cestmir Vohnout.

(APPARATUS AND INSTRUMENTS  
gastric clips, improved form)

DEMEL, J., MUDr.; SIMA, J., MUDr.

Blunt injury to the liver. Rozhl. chir. 35 no.4:216-220 Apr 56.

1. Z chirurgického nemocnice v Ostravě I, přednosta doc. MUDr.  
Cestmír Vohnout.

(LIVER, wds. & inj.  
blunt inj., surg. (Cz))



DEMEL, Josef, MUDr.

Transperitoneal sympatectomy. Rozhl. chir. 35 no.12:  
733-735 Dec 56.

1. Chirurgické oddelení nemocnice Ostrava I, prednosta  
doc. dr. Cestmir Vohnout.  
(SYMPATECTOMY  
transperitoneal, bilateral resection of lumbar  
sympathetics in one operation (Cs))

DEMEL, Josef; PEGRIM, Radomir

False perirenal traumatic cyst. Rozhl. chir. 37 no.5:311-314 May 58.

1. Chirurgické oddelení KUNZ v Ostravě, prednosta prim. MUDr. K. Typický  
a Ústav pro normální anatomii Lékařské fakulty Palackého university  
v Olomouci, prednosta doc. MUDr. J. Zrzavý. J. D., Ostrava-Stalingrad,  
Goncarovova 3.

(KIDNEYS, cysts

perirenal cyst simulated by traum. ureteral rupt.,  
case report (Cz))

(URETERS, rupt.

simulating perirenal pseudocyst, case report (Cz))

VRANA, Bohumir; MATIS, Frantisek; MALY, Bohumir; DEMEL, Josef

Congenital obliteration of the gastrointestinal lumen. Cesk. pediat.  
14 no.2:130-133 5 Feb 59.

1. Detske oddeleni nemocnice OUNĚ v C. Tesine, prednosta dr. B. Vrana  
Chirurg. oddeleni nemocnice OUNĚ v. C. Tesine, prednost dr. F. Matis  
Chirurg. oddeleni nemocnice KUNĚ v Ostrave-Zabrehu, prednosta dr. K.  
Typovsky Detske oddeleni KUNĚ v Ostrave-Zabrehu, prednosta dr. B. Vranova.  
(GASTROINTESTINAL SYSTEM, abnorm.  
obliteration of lumen (Cz))

DEMEL, Josef

Gastrostomy with an isolated jejunal loop. Rozhl. chir. 39 no.4:  
250-253 Ap '60

1. Chir. odd. KUNZ Ostrava V, prednosta C. Sc. dr. K. Typovsky.  
(STOMACH NEOPLASMS, surg.)  
(ESOPHAGUS, neopl.)  
(JEJUNUM, transpl.)

DEMEL, J.

1. "Contribution to the National Institute of Social Medicine in the field of research on the effects of the environment on the health of the population (II. National Institute of Social Medicine, University of the Philippines, Manila, Philippines)." (See pp. 1-2).
2. "National Institute of Social Medicine and National Institute of Social Medicine, University of the Philippines, Manila, Philippines." (See pp. 3-4).
3. "Contribution to the National Institute of Social Medicine in the field of research on the effects of the environment on the health of the population (III. National Institute of Social Medicine, University of the Philippines, Manila, Philippines)." (See pp. 5-6).
4. "Contribution to the National Institute of Social Medicine in the field of research on the effects of the environment on the health of the population (IV. National Institute of Social Medicine, University of the Philippines, Manila, Philippines)." (See pp. 7-8).
5. "Contribution to the National Institute of Social Medicine in the field of research on the effects of the environment on the health of the population (V. National Institute of Social Medicine, University of the Philippines, Manila, Philippines)." (See pp. 9-10).
6. "Contribution to the National Institute of Social Medicine in the field of research on the effects of the environment on the health of the population (VI. National Institute of Social Medicine, University of the Philippines, Manila, Philippines)." (See pp. 11-12).
7. "Contribution to the National Institute of Social Medicine in the field of research on the effects of the environment on the health of the population (VII. National Institute of Social Medicine, University of the Philippines, Manila, Philippines)." (See pp. 13-14).
8. "Contribution to the National Institute of Social Medicine in the field of research on the effects of the environment on the health of the population (VIII. National Institute of Social Medicine, University of the Philippines, Manila, Philippines)." (See pp. 15-16).
9. "Contribution to the National Institute of Social Medicine in the field of research on the effects of the environment on the health of the population (IX. National Institute of Social Medicine, University of the Philippines, Manila, Philippines)." (See pp. 17-18).
10. "Contribution to the National Institute of Social Medicine in the field of research on the effects of the environment on the health of the population (X. National Institute of Social Medicine, University of the Philippines, Manila, Philippines)." (See pp. 19-20).

DEMEL, KAZIMIERZ.

Zycie morza; zarys oceanografii biologicznej. Gdansk, Instytut Baltycki, 1947.  
443p. (Prace naukowo-informacyjne. Seria: Sprawy morskie) (Life of the sea;  
an outline of biological oceanography. illus., port., maps, bibl., index, tables)

SO: Monthly Index of East European Accession EEAI) LC Vol. 7, No. 5, 1958

DEMEL, K.

"Attempt to Determine the Biological and Fishing Potentialities of the Baltic Sea." P. 9, (GOSPODARKA RYBNA, Vol. 5, No. 12, Dec. 1953. Warszawa, Poland.)

SO: Monthly List of East European Accessions, (EMAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

POLAND/General Division, History, Classics, Personnel

Abs Jour: Ref Zhur-Biologia, No 5, 1958, 18853

Author : Demel Kazimierz

Inst : -

Title : Prof Dr. Borys Dixon

Orig Pub: Techn. i gospod, morska, 1955,5, No 6, 157

Abstract: An obituary of the Polish ichthyologist Dixon (died, 1955), a researcher of commercial fish species (herring, sprat, flounder, salmon). He was the first in Poland to introduce the method for determining the age of fish, which was based on research on the scales, and the layered growth of the bones.

Card 1/1



DETEL, K.

DETEL, Y. The Baltic Sea. p. 313

Vol. 26, No. 4, 1955  
CZASOPISMO GEOGRAFICZNE  
GEOGRAPHY & GEOLOGY  
Poland

So: East European Accessions, Vol. 5, No. 5, May 1956

DEMEL, Kazimierz

Polish research on the marine biology in the 15 years period 1945-  
1960. Kosmos biol 10 no.6:525-539 '61.

(Poland—Marine biology)

DEMEL, Kazimierz, prof. dr

Oceans and seas, the pantry of humanity. Horyz techn 17  
no.6:12-13 Je '64.

DEMEL, M.

~~DEMEL~~ M.; MULLER, M.

Results of conservative treatment of soliosis. Chir. narz. ruchm  
22 no.2:211-213 1957.

1. % Miedzyszkolnej Przychodni Lekarskiej Nr 1 w Warszawie Kierownik:  
dr K. Sokal Kierownik naukowy; prof. dr G. Wejsflog. Warszawa, ul.  
Hosza 88, Miedzyszkolna Przychodnia Lekarska Nr 1.

(SCOLIOSIS, ther.

conservative

(SCOLIOSIS, in inf. & child

conservative management, indic. (Pol))

DEMEL, Maciej

Physical education; a research problem. Review Pol Academy 7  
no.2:63-66 Ap/Jl '62.

1. Institute for Research in Physical Culture, Warsaw. Director  
of the Institute: Professor Wlodzimierz Missiuro, Warsaw,  
Marymoncka 34.

DEMEL, Maciej

Physical culture as a scientific problem; from the activities  
of the Scientific Institute of Physical Culture. Nauka  
polska 10 no.3:73-78 My-Je '62.

1. Instytut Naukowy Kultury Fizycznej, Warszawa, Marymoncka  
34. Dyrektor Instytutu: prof. Włodzimierz Missiuro.

Demel, W

621.315.1.056

561. Sag increase in overhead lines due to permanent elongation of conductors. W. DEMEL. *Przeglad elektrotech.* 30, No. 6, 227-228 (1954) In Polish.

A.C.S.R. conductors when subjected to heavy loads or large temperature changes become permanently elongated as a result of a plastic deformation of Al. This may reduce ground clearances below minimum standard values, requiring costly resagging and line outage. A graphical method of estimating plastic elongations is given. Sagging of conductors with increased ground clearances, to allow for plastic elongations estimated by this method, is preferable to the relatively costly prestretching of conductors and sagging to final values.

J. LUKASZEWICZ

DEMEL, W

POL.

621.319.1  
1906. Typical 110 kV electric power lines. J.  
CIRWALSKI, W. DZIETEL, Z. WILK AND Z. ZARUDZKI.  
Prace elektrotechniczne, No. 9, 381-6 (1954) In Polish.  
Aluminum cables steel-reinforced have been  
chosen for transmission of 30-40 MW over approx.  
50 km. Two overhead ground wires are multi-  
grounded on steel tower lines. Wood-pole lines have  
only 2 km of overhead ground wire on approaches to  
substations. Tensions in ACSR at 15°C limited to  
20% of ultimate strength, in steel wire to 15%. Steel  
towers are designed for spans of 300 m; wood struc-  
tures for 200 m spans. Six insulators of two types  
used for suspension and dead-end strings. Steel  
towers, lattice, multiple-braced, are factory-welded  
in sections for bolting on site. Semi-dead-end towers  
were designed for one broken conductor. Only  
6 types of towers were designed, heights being suitably  
increased by standard footing extensions. The type  
of prefabricated foundation to be used depends on  
soil classification. Wooden structures use only  
gusset plates with U-bolts, no through bolts, a single  
pole diagonal brace; the welded crossarm will be  
superseded by timber. Adequate foundations and  
structure height are obtained by use of prefabricated  
reinforced concrete stubs with horizontal cross-pieces.  
J. LUKASZEWICZ



DEMEL, W.

POL. 4

611315.1.034.3

1508. Ice loading of electric conductors. W. DEMEL.  
*Przeglad elektrotech.*, 30, No. 12, 302-9 (1954) 18  
Polish.

Formation of three main types of ice deposit is explained with reference to meteorological and topographical conditions and the regulations of various countries providing for wind and ice loading are compared. The following aspects of transmission line design are considered from the point of view of the ice loading: the critical span, the conductor tensions existing at various periods of operation, the vibration of conductors due to wind, and the effect of rigid fixing of the earthing wires at the tower top.

The use of safety links is suggested for important h.v. lines.  
S. M. DEMELSKI

DEMEL, W.

621.315.17  
4641. Transmission lines making full use of wood  
insulation. W. Demel. Przegląd elektrotech., 31,  
No. 4, 309-315 (1935) in Polish. EE  
Transmission lines with wood crossarms, without  
any steel crossarm bracing, have greater freedom  
from lightning outages than lines with steel crossarms.  
Pre-installation and maintenance wood treatments  
are recommended. Use of wood crossarms is recom-  
mended for lines up to 110 kV, except for areas with  
high rates of contamination leading to wood burning.  
Details of a typical 110 kV tangent structure show  
that to avoid timber decay, all bolts through wood  
poles and crossarms have been eliminated by U-  
clamps. J. LUKASZEWICZ

DEMEL, W.

Proper use of wood in overhead electric lines.

P. 18, (Przegląd Elektrotechniczny. Vol. 32, no. 1, Jan. 1956, Warszawa, Poland)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2,  
February 1958

DEMEL, W.

DEMEL, W. Insulation in areas with increased atmosphere pollution and its influence on the construction of poles for overhead power lines. p. 50. Vol. 32, no. 2, Feb. 1956. PRZEBUDOWA ELEKTROTECHNICZNY. Warszawa, Poland.

SOURCE: East European Accessions List (EEAL) LC Vol. 5, No. 6 June 1956

DEMEL, Wacław, mgr inż.; KAWKA, Kazimierz, inż.

A 400 kv transmission line. Przegl elektrotechn 39 no.9:330-335  
S '63.

1. Energoprojekt, Oddział Kraków.

DEMEL, Zdenek, inz.

Weda-Leyton membrane pumps. Uhli 7 no.1:34 '65.

Weda-Lenz immersion pumps. Ibid.:35

*CR*

Liming pastures. L. Brada and J. Doucha. Věstník Českoslov. Abstr. Zool. 1968, 0, 515-6(1968); Chem. Abstr., 1968, 62:11714d. Sufficient lime should be added for from 1/3 to complete adsorption satn. of the complex. The crop yields are sat in a definite and const. relation to  $pH$  values found exptly. Higher resistance of clover is not acquired by increasing amts. of lime.  
J. K.

15

RENEA, J.

"Mechanization of grass sowing.", p. 237, (ZA SOCIALISTICKE ZEMEDELSTVI,  
Vol. 3, #3, Mar. 1953, Czechoslovakia)

SO: Monthly List of East European Accessions, Vol. 2, #3, Library of  
Congress, August 1953, Uncl.



DEMELA, JOSEF.

AGRICULTURE

Demela, Josef. Pestovani jetele cerveneho a vojtesky na semeno. [Vyd. 1.]  
Praha, Statni zemedelske nakl., 1956. 61 p. (Vzory naseho zemedelstvi)  
[Producing red clover and alfalfa seed. 1st ed.]  
DA Not in DIC

Monthly List of East European Accessions (MEAL), LC, Vol. 8, no. 5,  
May 1959, Unclass.

DEMELA, JOSEF,

Praktické travina rství a jetelářství. [Vyd. 1.] Praha, Státní  
zemědělské nakl., 1956. 470 p. [Practical grass and clover growing.  
1st ed.]  
DA Not in DLC

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 10, October 1957. Uncl.

DEMELA, J.

Mechanization of grass and clover cultivation for seed. p.89.  
(Beseda Venkovske Rodiny, Vol. 30, No. 2, Apr. 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 9, Sept. 1957. Uncl.

COMMON ELEMENTS										COMMON VARIANTS									
1ST AND 2ND ORDER										3RD AND 4TH ORDER									
PROCESSES AND PROPERTIES INDEX																			
F										B									
<p>2324. LIGNITE AND METHANE OF SOUTHERN MORAVIA. Demela, S. (Paliva a Voda, May 1948, vol. 28, 164-167). Lignite coal is found in southern Moravia over an area of 500 q.km. together with naphtha and natural gas. Reserves ready for mining are from 85 to 100 million tons of caloric value 2200-2600 Cal./kg. and represent about 35 milliard kW.h. Natural gas of caloric value 9000 cal. is present in the same area and is utilized, improving the lighting gas in Brno where it is transmitted by means of 45 km. long piping, and is compressed, for motor car fuel. (L).</p>																			
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>										<p>FROM SOURCE</p>									
<p>FROM SOURCE</p>										<p>FROM SOURCE</p>									

MALEK, P.; DEMELOVA, J.; ZASTAVA, V.; KOLC, J.

Problems of tetracycline antibiotics in the prevention and treatment of experimental gas gangrene. Rozhl. chir. 42 no.3: 196-200 Mr '63.

1. Ustav klinicke a experimentalni chirurgie v Praze, reditel prof. dr. B. Spacek, DrSc. Ustav ser a ockovacich latek v Praze, reditel dr. J. Malek.  
(GAS GANGRENE) (CHLORTETRACYCLINE)  
(ISCHEMIA) (MUSCLES) (WOUNDS AND INJURIES)

MAZACEK, M., Dr.; HOUBA, V., Dr.; ~~DEMELOVA, M., Dr.~~; za technicke  
spoluprace J. Casneho, J. Machackove, J. Perlika.

Determination of protective effect of ~~gamma~~ globulin normal and anti-  
pertussis gamma globulin in model infections with Hemophilus pertussis  
in animals. Cesk. pediat. 11 no.9:669-674 Sept 56.

1. Vyzkumny ustav imunologicky, Praha.

(WHOOPING COUGH, exper.

determ. of protective eff. of normal whooping cough immune &  
antipertussis gamma globulin (Cz))

(GAMMA GLOBULIN

protective eff. of normal and whooping cough immune ~~gamma~~  
globulin in exper whooping cough (Cz))

DEMELOVA, M.; MALEK, J.; JOHANOVSKY, J.; HAZA, J.; BLASKO, B.; FRANCOVA, D.;  
HAZACEK, M.

Experimental study of gas gangrene mono- and trivaccines. J. hyg.  
epidem., Praha 5 no.4:470-478 '61.

1. Institute of Sera and Vaccines, Praha.

(GAS GANGRENE immunol) (VACCINATION exper)

DEMELOVA, M.; FRANCOVA, D.

The effect of staphylococcal antitoxic sera on the course of  
staphylococcal infection. Cesk. epidem. 11 no.1:41-45 Ja '62.

1. Ustav ser a ockovacich latek, Praha,  
(STAPHYLOCOCCAL INFECTIONS exper.) (IMMUNE SERUMS pharmacology)



DEMELOVA, M.; SOUCKOVA, J.

The persistence of the lethal effect in toxoids of some staphylococcal strains. 1st communication. J. hyg. epidem. 7 no.2:195-204 '63.

1. Institute of Sera and Vaccines, Prague.  
(TOXINS AND ANTITOXINS) (STAPHYLOCOCCUS)

DEMSELOVA, M.; VEPREKOVA, A.

Persistence of lethal effect in toxoids of some staphylococcal strains. II. Demonstration of the lethal factor in toxins and toxoids of the strain 02 prepared by submerge cultivation. J. hyg. epidem. (Praha) 8 no.4:442-449 '64.

1. Institute of Sera and Vaccines, Prague.

DEMENDY, Mikloa

New development in the field of anticorrosion dyeing. Gepgyartastechn  
1 no.4:153-154 J1 '61.

DEMENDY, Miklos

Protection of the Erzsebet Bridge against corrosion. Musz elet 18  
no.24:11 21 N '63.

GOTLOBER, V.; DEMENEV, A.

Engineer's work and technological progress. Sots.trud 5 no.8:  
53-59 Ag '60. (MIRA 13'11)  
(Sverdlovsk Province--Industrial management)

DEMENEV, A.; LEMELEV, S.

[Technological progress is the basis for increasing labor  
productivity] Tekhnicheskii progress osnova pod"ema proiz-  
voditel'nosti truda. Sverdlovsk, Sverdlovskoe knizhnoe izd-  
vo, 1959. 53 p. (MIRA 17:3)

D. D. MLV, A. I.

In the Sverdlovsk Economic Council. Biul.tekh.-ekon.inform. no.1:  
78-79 '61. (MIA 14:2)  
(Sverdlovsk Province--Economic councils)

DEMENEV, Anatoliy Iosifovich; ADAMOVA, L., red.; PAL'MINA, N., tekhn.  
red.

[Indestructible foundation of communism] Nesokrushimyi fundament kommunizma. Sverdlovsk, Sverdlovskoe knizhnoe izd-vo, 1962. 61 p. (MIRA 15:11)  
(Russia--Industries)



PA 240T1

DEMENEV, I. V.

UNSR/Chemistry - Titanium

Dec 52

"The Structure of the Double Sulfate of Titanium and Potassium," I. V. Demenev, N. N. Buinov and V. M. Polyakova

"DAN SSSR" Vol 87, No 6, pp 965, 966

The structure of  $2K_2SO_4 \cdot 2TiOSO_4 \cdot 5H_2O$  was investigated with an electron microscope. It was found that it consists of crystals having a size of 10-30 Å. These crystals form aggregates. Submitted by Acad I. P. Bardin 23 Oct 52.

240T1

*DEMENTEV, N.*  
SUBJECT: USSR/Activities of the Ural Academy of Sciences 25-5-16/35  
AUTHOR: Demenov, N., Chairman of the Presidium of the Ural Branch of  
the Academy of Sciences (УФАН - UFAN)  
TITLE: Scientists Help the Ural Industry (Uchenyye - promyshlennosti  
Urals)  
PERIODICAL: Nauka i Zhizn' - May 1957, No 5, p 35 (USSR)  
ABSTRACT: The main objective of the scientists of the Ural Academy of  
Sciences is the solving of problems connected with the com-  
plex utilization of natural resources of the Urals. For ex-  
ample the Geological Institute has worked out new methods of  
neutronic gamma and gamma-gamma core sampling for prospecting  
oil, iron ore, and coal. The Institute of Metallurgy has de-  
veloped the autocatalytic theory of reducing metals from  
oxides and sulfides. The Institute of Metals has produced  
a number of new defectoscopes for controlling the quality of  
products made by the metallurgical and machine-building  
industry. One of them is intended for checking the quality  
of turbo-generator shafts. This automatic apparatus magnet-  
izes the object within 1/200 of a second. The Academy en-

Card 1/2

COMMON ELEMENTS		PROCESSES AND PROPERTIES INDEX	
<p>DEMENEY, N.</p>		<p>Experimental studies of laminar systems. VII. Wetting phenomena on surface films of metallic sulfides. G. Motrushin and N. Demenev. <i>J. Phys. Chem.</i> (U. S. S. R.) 6, 1096-70(1963); <i>U. S. A. 30, 7415</i>. 1964. — The angles of contact for various sulfide films were determined photomicrographically as CuS, 62°; PbS, 74°; ZnS, 77°; Bi<sub>2</sub>S<sub>3</sub>, 72°; ZnS, 70°; S, 86°. From these results, and those on the effects of various impurities it is concluded that the wetting of the films is a temporary phenomenon that cannot be explained by orientation of molecules, only, but is due also to adsorption of ions from the solution. Sulfide films adsorb anions preferentially. F. H. Rathmann</p>	
<p>ASAC-35A METALLURGICAL LITERATURE</p>		<p>CLASSIFICATION</p>	

2

THE EFFECT OF XANTHATES ON THE WETTABILITY OF SULFUR.  
L. Demarey. Colloid J. ( U.S.S.R. ) 2 665-8 (1936).-  
Xanthates do not change the wettability on the surface  
of S. films formed by  $H_2S$  and  $FeCl_3$ , indicating little  
or no absorption. No static hysteresis was found. The  
angle of contact, contrary to the work of Wark and Cox  
(C.A. 29, 6974 ) and of Siedler (C.A.28, 6403 ) is not a  
const., but varies from  $74^\circ$  to  $86^\circ$  for both K.Et xanthate  
and Bu xanthate. F.H. Rathmann

1ST AND 2ND INDEX										3RD AND 4TH INDEX									
<p>SELECTIVE WETTING OF THIN LAYERS OF METAL SULFIDES. N. Dem'yanov and N. Dem'yanova. <i>Colloid. J. (U. S. S. R.)</i> 30: 579 (1968); cf. C. A. 30, 7415<sup>1</sup>. Selective wetting of thin layers of sulfides of Cu, Pb, Ag, Zn and Bi, by drops of <math>C_2H_5</math> in <math>H_2O</math>, or of <math>H_2O</math> in <math>C_2H_5</math> or of bubbles of air in <math>H_2O</math> was studied by measuring the angle of wetting. The results indicate that the metal sulfide layers are hydrophobic.</p> <p>S. L. Madorsky</p>										<p>2</p>									
<p>ATLANTA METALLURGICAL LITERATURE CLASSIFICATION</p>																			
<p>190000 190000 190000 190000 190000 190000 190000 190000 190000 190000</p>										<p>190000 190000 190000 190000 190000 190000 190000 190000 190000 190000</p>									

MATERIALS INDEX		PROCESS AND PROPERTIES INDEX	
<p><b>DEMENOV, N.</b></p> <p><b>The Properties of Thin Layers of Metal. Wetting of Metals.</b> N. Demenov, and N. Dem'yanova (<i>Kolloid. Zhur. (Colloid. J.)</i>, 1937, 3, 871-882; <i>C. Abs.</i>, 1938, 32, 6624).—[In Russian.] Metals like silver, platinum, and gold, obtained in the form of thin layers by the action of a reducing gas (formalin or arsine vapours) on the surface of their salt solutions, are hydrophobic. Wetting on one side, noted by Devaux (<i>Kolloid. Z.</i>, 1932, 66, 280-274), does not occur in the case of thin layers of silver; on the contrary, even prolonged contact of the metal surface with pure water does not change the angle at the boundary metal-water-air. Under the conditions of selective wetting at the boundary metal-water-non-polar liquid (benzene) the metals again reveal a well-defined hydrophobic character. Static hysteresis of wetting is absent. Surface active acids like isovaleric, palmitic, and oleic acids appreciably change the degree of wetting. The maximum degree of non-wetting, corresponding to definite concentrations of the fatty acids, is evidently due to the formation of a saturated unimolecular layer of the acid molecules on the metal surface, with definite orientation of the <math>\text{CH}_3</math> groups on the exterior. Potassium ethyl xanthate has practically no effect on the wetting of metal surfaces; potassium <i>iso</i>-amyl xanthate decreases the wetting properties.—S. G.</p>			
<p>ASB-3LA METALLURGICAL LITERATURE CLASSIFICATION</p>			
<p>SEARCHED INDEXED</p>		<p>RELIST ONE ONE</p>	

DEGENEV, N.V.; MOKRUSHIN, S.G., doktor khim. nauk, otvetstvennyy red.

[Surface metal sols and gels] Poverkhnostnye zoli i geli metallov.  
Sverdlovsk, Izd-vo Ural'skogo fil. akad. nauk SSSR. 1948. 59 p.  
(Akademiia nauk SSSR. Ural'skii filial, Sverdlovsk. Institut  
khimii i metallurgii. Trudy, no.1). (MIRA 11:4)  
(Metallography) (Surface chemistry) (Colloids)

M. A.

3.

Investigation of the Structures of Metallic Films Formed on the Surface of Aqueous Solutions of Metal Salts by the Action of Reducing Gases. I.-- The Structure of Platinum Films. N. N. Buinov, N. V. Demenev, A. S. Shur, and G. G. Fedorova (Kolloid, Zhur., 1949, 11, (5), 289-298; C. Abs., 1950, 44, 901).--(In Russian). Platinum films were prepared on water by passing hydrogen over the surface of platinum salt solutions, transferred on to colloidal films, and examined in an electron microscope. The results, together with earlier results obtained by using X-ray, electron diffraction, and kinetic methods (cf. Demenev, Trudy Inst. Khim. i Met., Akad. Nauk. S.S.S.R., Ural. Filial, 1948, (1)) show that the films start as separate crystals smaller than the limit of the electron microscope (30 Å.). Later these crystals combine to aggregates, 0.5-1 µ in size, which have no definite shape but show preferred angles of 90° and 120°; this means that coagulation is anisotropic. The aggregates not only lie in the surface but form also under the surface. When the average thickness of the film is 120 Å., the aggregates form branched chains; and at greater thicknesses the film is similar to a platinum sponge.



FA 52/497100

USSR/Physics  
Electron Microscopy  
Platinum

49 MAY

Electron-Microscope Investigation of the Structure of Platinum Films on the Surface of Water Solutions of Metal Salts by the Action of Gas Regenerators, N. N. Bryukov, N. V. Demenev, A. S. Smir, G. G. Fedorova, Inst of Chem and Metal, Inst of Phys of Metals, Ural Affiliate, Acad Sci USSR, 4 pp

"Dok Ak Nauk SSSR" Vol. LXVI, No 2

Presents results of an investigation of platinum  
52/497100

USSR/Physics (Contd)

May 49

films produced on surfaces of aqueous potassium chloroplatinate solutions by actin on the surface. Used an electron microscope - stereoscopic - initial.

DEMENEV, N. V.

by

platinic solutions by act  
surface. Used an m  
on microscope  
scopic -

Chem-1

329

[Report, 1963]

Seventh

5/0048/1  
C-10048-1

M

**\*Electron-Microscopical Investigation of the Structure of Gold Foils Obtained on the Surface of Aqueous Solutions of a Salt of the Metal by the Action of Reducing Gases.** N. V. Demenev, N. N. Bulnov, and M. I. Milyutina (Doklady Akad. Nauk S.S.S.R.; 1949, 68, (4), 721-723). --[In Russian]. The gold foils were selected from a preliminary X-ray examination which showed that crystal dimensions of the order 150 Å could be expected. The foils were obtained on the surface of dil. auric chloride solutions by reduction with hydrogen gas and arsine. The influence of the rate of formation of the foils on their structure was investigated by varying the velocity and pressure of the current of reducing gas, and the foil thickness was determined by weighing. The investigation revealed that the foils were extremely porous and consisted of individual crystals and three-dimensional aggregates. In such foils, of an average thickness <100 Å, the shape and dimensions of individual crystallites can be conveniently studied. The most frequent shapes are hexagons, pentagons, and triangles, rarely rhombs. The first three of these are projections of the octahedral, cubic-octahedral, and pyramid-shaped gold crystallites, of which the last are undeveloped octahedral forms, or cubes. The hexagonal, pentagonal, and triangular shapes can only be observed when the crystallites are so oriented that one of the octahedral faces lies in the surface of the solution. Other forms of the crystallites are also possible. The average size of the particles was determined from the distribution curve of the crystallites, and by electronography. It was found that the size of the crystallites increases with reduction of the velocity of the current of reducing gas. The maximum for a foil obtained in 16 hr. and having an average thickness of 25 Å. was 160 Å., and for a foil obtained in 15 min. of an average thickness 60 Å., 110 Å.—B. P. K.

Inst. Chem. + Metallurgy and Inst. of Metals, USSR Acad. Sci., AS  
Oct. 1950

CA

2

Structure of the metal films prepared on the surfaces of aqueous solutions of metal salts by the action of reducing gases. II. Structure of gold films. N. V. Demenev, N. N. Bulmoy, and M. I. Milyutina (Ural Branch, Acad. Sci. U.S.S.R.). *Kolloid. Zhur.* 12, 252-5(1950); cf. C.A. 43, 6004b; 44, 912b.—Au films produced in the surface of a  $\text{AuCl}_3$  soln. by H or  $\text{AsH}_3$  consist of aggregates of crystals sepd. by empty spaces. The most frequent size of the crystals was, e.g., 110-140 Å. in films whose av. thickness (dtd. by weighing) was 25-40 Å. Films produced rapidly (e.g. 160 Å. in 1 min.) have crystals of approx. identical size, combined into dendrites, whereas films produced slowly (e.g. 100 Å. in 3 hrs.) usually consist of (often hexagonal) clusters of relatively large crystals surrounding a small crystal. These results were obtained with an electron microscope.  
J. J. Bikerman

10

1ST AND 2ND GROUPS PROCESSES AND PROPERTIES INDEX

**Electron-Microscopic Investigation of the Structure of Palladium Films, Produced on the Surfaces of Water Solutions of Metallic Salts by the Action of Gaseous Reducing Agents. (In Russian.) N. V. Demenev, N. N. Buinov, and M. I. Milyutina. Doklady Akademii Nauk SSSR (Reports of the Academy of Sciences of the USSR), new ser., v. 73, Aug. 1, 1950, p. 751-754.**

Results of above study are compared with those previously obtained with thin films of Au and Pt. Hydrogen was used as the reducing agent and PdCl<sub>2</sub> as the salt. Results are illustrated and discussed. Influence of rate of reduction was particularly important.

SSA-55A METALLURGICAL LITERATURE CLASSIFICATION

140880 \*A

140880 HIF ONE ONE

140880 ONE ONE 151

140880 ONE ONE 151

USSR/Chemistry - Catalytic Hydrogenation Feb 51

"Catalytic Activity of Platinum Films Produced on Surfaces of Aqueous Solutions of Platinum Salts by Action of a Reducing Gaseous Atmosphere," A. S. Shur, N. V. Demenev, Inst. Chem. and Metallurgy, Ural Affiliate, Acad. Sci. USSR, Sverdlovsk, (-6/957-1), 25, 1551.

"Zhur. Fiz. Khim., Vol. XXV, No 2, pp 136-142. Hydrogenated ethylene by reaction  $C_2H_4 + H_2 \rightarrow C_2H_6$  over Pt film catalyst produced on surface of aq soln of Pt salts by reduction with  $H_2$ . Found optimum film thickness. Studied reaction

184T26

USSR/Chemistry - Catalytic Hydrogenation Feb 51  
(Contd)

kinetics, including variation of catalytic activity with temp and decrease of activity during reaction due to change in cryst structure (recrystn).

184T26

DEMENEV, N. V.

1. DEMENEV, N. V. Prof.

2. USSR (600)

4. Technology

7. Creative cooperation with production. Priroda 41 no. 10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

1. DEMENEV, N. V., SHAROVA, A. K., POLYAKOVA, V. M.
2. USSR (600)
4. Sulfates
7. Reaction of titanium sulfate with potassium sulfate.  
Dokl. AN SSSR 87 No. 5, 1952

9. Monthly Lists of Russian Accessions, Library of Congress, March 1953, Unclassified.

1. DEMENEV, N. V., BUYNOV, N. N., POLYAKOV, V. M.
2. USSR (600)
4. Sulfates
7. Structure of the double salt of titanium and potassium sulfates.  
Dokl. AN SSSR 87 No. 6, 1952

9. Monthly Lists of Russian Accessions, Library of Congress, March 1953, Unclassified.



587

AUTHORS: Demenev, N. V., Milyutina, M.I., Sharova, A. K. and Shtin, A.P.  
 TITLE: Preparation of an Acid Sulphate of Trivalent Titanium.  
 (O poluchenii kisloy sernokisloy soli trekhvalentnogo titana).  
 PERIODICAL: "Zhurnal Neorganicheskoy Khimii" (Journal of Inorganic Chemistry,  
 Vol.II, No.2, pp.465-467 (U.S.S.R.)) 1956  
 ABSTRACT: The formation of a violet-coloured crystalline precipitate  
 in quantities strongly dependent on sulphuric-acid  
 concentration was observed when working with reduced acid  
 solutions of titanium. To determine the composition of the  
 precipitate and elucidate the conditions leading to its  
 formation was the object of the work described. The solutions  
 used contained either 15.25, 25.0 or 37.5 g/litre of  $TiO_2$   
 initially, and the final contents of this and of sulphuric  
 acid were determined. The results are tabulated and indicate  
 that with 700 - 100 g/litre of  $H_2SO_4$  precipitation occurs to  
 90-97%. Analysis of the salt prepared with careful  
 exclusion of oxidation gave the composition  $Ti_2(SO_4).H_2SO_4.8H_2O$ .  
 It is a crystalline powder soluble in water, dilute  
 sulphuric and hydrochloric and concentrated sulphuric acids.  
 It is recommended as a source of trivalent titanium for  
 analytical work. There are three references, one of which  
 is Russian. 1 Table.

Received April 26, 1956.

Card 1/1

USSR/Inorganic Chemistry - Complex Compounds.

C.

Abs Jour : Ref Zhur - Khimiya, No 9, 1957, 30286

solutions containing from 15 to 9.7 gram equivalent I per liter, after calcination at 1000° had the composition  $Nb_2O_5 \cdot P_2O_5$ , while that obtained from solutions having a lower content of I had the composition  $2Nb_2O_5 \cdot P_2O_5$ . Excess precipitating agent does not affect the composition of the precipitate.

Card 2/2



DEMENEV, N.V.; MILYUTINA, M.I.; SHAROVA, A.K.; SHTIN, A.P.

Preparation of trivalent titanium bisulfate. Zhur.neorg.khim.  
2 no.2:465-467 P '57. (MLRA 10:5)  
(Titanium sulfates)

SOV/78-4-4-27/44

5(4)

AUTHORS:

Yatsenko, S. P., Demenev, N. V.

TITLE:

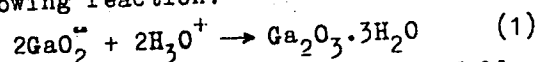
Investigation of the Precipitation of Gallium Hydroxide From Alkaline Solutions During Carbonization (Issledovaniye osazhdeniya gidrata okisi galliya iz shchelochnykh rastvorov pri karbonizatsii)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 4, pp 869-876 (USSR)

ABSTRACT:

The authors investigated the variation of the pH value of alkaline gallate solutions during the precipitation of gallium hydroxide with carbonic acid at 60°. Gallium hydroxide precipitated from an alkaline gallate solution according to the following reaction:



The reaction rate is expressed by the following equation:

$$-\frac{dc_{\text{GaO}_2^-}}{dt} = K' \cdot c_{\text{GaO}_2^-}^2 \cdot c_{\text{H}_3\text{O}^+}^2 \quad (2)$$

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At a constant pH value of the solution the equation (2) adopts

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Investigation of the Precipitation of Gallium Hydroxide from Alkaline Solutions During Carbonization

this form:

$$-\frac{dc_{\text{GaO}_2^-}}{dt} = (K' \cdot c_{\text{H}_3\text{O}^+}^2) c_{\text{GaO}_2^-}^2 = K \cdot c_{\text{GaO}_2^-}^2 \quad (3)$$

The solubility of gallium hydroxide in a sodium gallate solution of an ionic strength of 1.1-1.2 at a pH value of 9.45-9.65 is intensified with increasing sodium carbonate content. The dependence of the activity coefficient of bicarbonate and carbonate ions on the ionic strength of the solution was investigated at 25°; the results are given in figure 1. With the introduction of carbon dioxide into the gallate solution only the pH value decreases at the beginning. At a certain pH value the hitherto clear solution begins to grow turbid. This pH value during the occurrence of turbidity is a linear function of the absolute temperature, which in the temperature range of 20-60° follows the empirical equation:

$$\text{pH} = \frac{2524}{T} + 2.32 \quad (16)$$

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The course of titration of the gallate solution with carbonic

Investigation of the Precipitation of Gallium Hydroxide from Alkaline  
Solution During Carbonization SOV/78-4-4-27/44

acid is represented in figure 4. Figure 5 contains the precipitation of gallium oxide hydrate from the gallate solution at a constant pH value. The results of chemical analysis of gallium oxide hydrate obtained from gallate solutions with carbonic acid are given in a table. Another table shows the reproducibility of the precipitation of gallium oxide hydrate; a third table gives the differences between the experimental values of gallate ion concentration as well as the values computed from the amount of absorbed  $\text{CO}_2$ . There are 6 figures, 3 tables, and 22 references, 8 of which are Soviet.

ASSOCIATION: Ural'skiy filial Akademii nauk SSSR Institut khimii (Ural  
Branch of the Academy of Sciences USSR, Chemical Institute)

SUBMITTED: January 30, 1958

Card 3/3

SOV/78-4-6-37/44

5(2)

AUTHORS:

Yatsenko, S. P., Demenev, N. V.

TITLE:

Investigation of the System Gallate - Carbon Dioxide - Water  
(Issledovaniye sistemy gallat-uglekislota-voda)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 6,  
pp 1437 - 1442 (USSR)

ABSTRACT:

The solubility in the systems  $\text{Ga}_2\text{O}_3\text{-Na}_2\text{O-H}_2\text{O}$  and  $\text{Ga}_2\text{O}_3\text{-Na}_2\text{O-H}_2\text{O}$  was investigated at room temperature ( $20 \pm 0.5^\circ$ ). The system  $\text{Ga}_2\text{O}_3\text{-Na}_2\text{O-H}_2\text{O}$  was investigated in the concentration region of 15.5 - 155 g/l sodium oxide. The results of the solubility determinations are given in table 1 and in figures 2 and 3. The solid phase in the system has the composition  $\text{Ga}_2\text{O}_3 \cdot 3\text{H}_2\text{O}$ . The solubility of gallium oxide trihydrate was investigated in soda and the results are given in figure 4. The concentration equilibrium in the system gallate - carbon dioxide - water was investigated at room temperature and the results are summarized in tables 2 and 3. The solid phase of this system has the composition  $\text{NaGa(OH)}_2\text{CO}_3 \cdot \text{H}_2\text{O}$ . The radiographs of gallium

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Investigation of the System Gallate - Carbon  
Dioxide - Water

SOV/78-4-6-37/44

oxide trihydrate and basic gallium carbonates were taken and compared with the corresponding aluminum compounds (Fig 5 a - e). The conditions for the production of double-basic sodium-gallium carbonate were detected. The sodium gallate solution is added at room temperature to the sodium bicarbonate solution in order to produce basic sodium-gallium carbonate in crystalline state. The formation of basic gallium carbonate proceeds probably according to the reaction:

$\text{NaGa}(\text{OH})_4 + 2\text{NaHCO}_3 = \text{NaGa}(\text{OH})_2\text{CO}_3 \cdot \text{H}_2\text{O} + \text{Na}_2\text{CO}_3 + \text{H}_2\text{O}$ . A volumetric method for the determination of the free alkalis and bicarbonate ions in gallate-soda solutions was suggested. There are 5 figures, 3 tables, and 8 references, 2 of which are Soviet.

ASSOCIATION: Ural'skiy filial Akademii nauk SSSR institut khimii (Ural Branch of the Academy of Sciences, USSR, Institute of Chemistry)

SUBMITTED: March 29, 1958

Card 2/2

DEMENEV, N., prof.

Leading figure in science. NTO 2 no.4:5-6 Ap '60.  
(MIRA 13:6)

1. Predsedatel' Sverdlovskogo oblastnogo soveta nauchno-  
tekhnicheskikh obshchestv, predsedatel' prezidiuma Ural'skogo  
filiala AN SSSR, Sverdlovsk.  
(Lenin, Vladimir Il'ich, 1870-1924)

YATSENKO, S.P.; DEMENEV, N.V.

Isomorphous coprecipitation of gallium with aluminum  
hydroxide from alkaline solutions. Zhur.neorg.khim.  
5 no.7:1618-1625 J1 '60. (MIRA 13:7)

1. Ural'skiy filial Akademii nauk SSSR. Institut khimii.  
Laboratoriya redkikh elementov.  
(Gallium) (Aluminum hydroxide)

YATSENKO, S.P.; DEMENEV, N.V.

Coprecipitation of gallium with aluminum hydroxide during  
the carbonization of an alkaline solution. Zhur.neorg.  
khim. 5 no.7:1626-1630 J1 '60. (MIRA 13:7)

1. Ural'skiy filial Akademii nauk SSSR. Institut khimii.  
Laboratoriya redkikh elementov.  
(Gallium) (Aluminum hydroxide)

S/598/60/000/004/010/020  
D217/D302

AUTHORS: Sharova, A.K., Demenev, N.V., Fotiyev, A.A. and  
Ivakin, A.A.

TITLE: Production of titanium dioxide from ilmenite concentrates  
by sodium sulphate melting

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Titan i yego  
splavy. No. 4. Moscow, 1960. Metallurgiya titana, 95-101

TEXT: In all experiments, ilmenite concentrate from the Irshinsk depo-  
sits, of 0.056 mm mesh size were used. The chemical composition of the  
concentrate was as follows: 51.46%  $\text{TiO}_2$ , 33.78% Fe, 1.04%  $\text{Al}_2\text{O}_3$ , 1.56%  
 $\text{SiO}_2$ , 0.86% MgO, 0.26%  $\text{V}_2\text{O}_5$ , 0.42% MnO and traces of CaO. Wood charcoal  
with an ash content of approximately 2% and 0.4 mm mesh size was used as  
the reducing agent. The main reagent,  $\text{Na}_2\text{SO}_4$ , is a natural product.  
The charges of ilmenite concentrate,  $\text{Na}_2\text{SO}_4$  and wood charcoal were

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S/598/60/000/004/010/020  
D217/D302

Production of titanium ...

thoroughly mixed and transferred to porcelain or graphite crucibles. Charges weighing 200-300 grams were used for the experiments. The mixtures were melted in a silite furnace. It was assumed that the melting was complete at the moment when gases ceased to be evolved from the melt. Each crucible was then withdrawn from the furnace and the melt cast in a graphite mould. After cooling, the melt was ground and subjected to leaching with water and acid. The residue was calcined and analyzed for its iron and titanium dioxide content. When ilmenite concentrates are melted with  $\text{Na}_2\text{SO}_4$ , the following reaction occurs:  $\text{FeTiO}_3 + \text{Na}_2\text{SO}_4 + 2\text{C} = \text{FeS} + \text{Na}_2\text{TiO}_3 + 2\text{CO}_2$ . The reaction intensity depends among other factors on the method of melting and the surface area of contact of the various phases. In order to find the conditions under which maximum extraction of iron in aqueous leaching is attained, the following factors were studied: Volume ratio between solid and liquid, time of stirring, temperature of leaching and degree of grinding of the melts. In all experiments, leaching was carried out at  $25^\circ\text{C}$  for 15 minutes. The

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D217/D302

Production of titanium ...

particle size of the melt was 1.6-0.85 mm. It was found that complete extraction of iron from the melt can be attained only when the sodium sulphate and carbon contents in the charge are sufficiently high. The optimum ratio between concentrate, sodium sulphate and wood charcoal in the charge (in parts-by-weight) is 1:2:0.6. At 1000-1050°C, complete decomposition of the ilmenite concentrate occurs (up to 98 or 99%). No melting of the charge occurs up to 900°C. At higher temperatures, intense melting occurs with much evolution of gas and a homogeneous fluid melt is formed. Extraction of iron sulphide into the solution depends on the time of leaching and the degree of grinding of the melt. An increase in the time of leaching from 15 to 60-90 minutes decreases the amount of iron extracted into the solution owing to the transformation of the sulphide from a soluble form into a gel. The optimum conditions for extracting iron sulphide in the aqueous solution (up to 80 or 85%) are as follows: ratio solid: liquid = 1:10; solution temperature = 70-80°C, degree of comminution of the melt = 2-3 mm and time of leaching = 15-20 minutes. As a result of treating the residue, titanium dioxide

Card 3/4

Production of titanium ...

S/598/60/000/004/010/020  
D217/D302

is obtained in a form suitable for metallurgical purposes and for producing titanium tetrachloride. There are 5 figures, 1 table and 9 references: 6 Soviet-bloc and 3 non-Soviet-bloc. The reference to the English language publication reads as follows: J.C. Witt, Am. Chem. Soc., 43, no. 4, 734, 1921. ✓

Card 4/4



S/200/62/000/004/002/002  
D204/D307

AUTHORS: Bamburov, V.G., Demenev, N.V., and Polyakova, V.M.  
TITLE: Investigation of the ternary system  $\text{TiF}_4 - \text{KF} - \text{H}_2\text{O}$   
PERIODICAL: Akademiya nauk SSSR. Sibirskoye otdeleniye, Izvestiya,  
no. 4, 1962, 73 - 80

TEXT: The above system was investigated, at  $20 \pm 0.1^\circ\text{C}$ , since a study of the K fluorotitanates is important in the technological separation of Ti, Nb and Zr and in the processing of lanthanon ore. Water and solid KF were added to a fixed amount of aqueous  $\text{TiF}_4$  so that the  $\text{TiF}_4 : \text{KF}$  ratio varied from 0.1 to 9 by weight, and the system was allowed to stand for 0.5 - 1 hr. The filtrate was then analyzed chemically and the solid phases by physico-chemical methods. It was found that  $\text{K}_2\text{TiF}_6 \cdot \text{H}_2\text{O}$  crystallized in the cubic system from solutions containing  $>3\%$  KF and also, in irregular plates, when the  $\text{TiF}_4 : \text{KF}$  ratio was 1.55 - 2.42. Monoclinic irregular lamellas of  $\text{K}_2\text{TiF}_6 \cdot 2\text{H}_2\text{O}$  were formed from solutions containing up to  $3\%$  KF  
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Investigation of the ternary system ... S/200/62/000/004/002/002  
D204/D307

and mixtures equivalent to  $\text{TiF}_4 - 2\text{KF}$  gave  $2\text{K}_2\text{TiF}_6 \cdot 3\text{H}_2\text{O}$  in the form of hexagonal prisms. Increasing  $\text{TiF}_4 : \text{KF}$  to  $>2.5$  yielded  $\text{K}_2\text{TiF}_6$ . The solubilities of  $\text{K}_2\text{TiF}_6 \cdot \text{H}_2\text{O}$ ,  $2\text{K}_2\text{TiF}_6 \cdot 3\text{H}_2\text{O}$  and  $\text{K}_2\text{TiF}_6 \cdot 2\text{H}_2\text{O}$  in water at  $20^\circ\text{C}$  were determined as 1.19, 1.21 and 1.25 % respectively. The hydrated complexes were then heated from  $20^\circ$  to  $720^\circ\text{C}$  at a rate  $>8^\circ$  per minute to determine their thermal stabilities. It was found that above  $420^\circ\text{C}$  the hydrates underwent hydrolysis and transformed into cubic  $\text{K}_2\text{TiOF}_4$ . There are 5 figures and 2 tables.

ASSOCIATION: UFAN SSSR (UFAS USSR)

SUBMITTED: March 15, 1961

Card 2/2

BAMBUROV, B.G.; DEMENEV, N.V.; POLYAKOVA, V.M.

Studying the solubility in the system  $KF - ZrF_4 - H_2O$  at  $20^\circ C$ .  
Izv. Sib. otd. AN SSSR no.5:70-75 '62.

(MIRA 18:2)

1. Ural'skiy filial AN SSSR, Sverdlovsk.

DEMENEV P.V.

DEMENEV, P.V.

KARGIN, V.A.

5(3) P4 PHASE 1 BOOK EXPLOITATION SOV/1589

Academiya nauk SSSR.

Khimiya bol'shikh molekul; sbornik statey (Chemistry of Large Molecules; Collection of Articles) Moscow: Izd-vo AN SSSR, 1958. 299 p. (Series: Akademiya nauk SSSR. Nauchno-populyarnaya seriya) 30,000 copies printed.

Compiler: G.V. Shilovskiy; Resp. Ed.: A.V. Topchiyev, Academician; Ed. of Publishing House: V.A. Boyarskiy; Tech. Ed.: I.M. Gerasimov.

REMARKS: This book is intended for a wide circle of readers including those who have had no training in chemistry. It can also serve as a manual for propagandists, teachers, and journalists.

# Chemistry of Large Molecules (Cont.)

SOV/1589

COVERAGE: This collection of articles reflects the trend for the future development of the Soviet chemical industry as indicated by the May plenary session of the Central Committee of the Communist Party within the framework of the new Seven Year Plan. These articles were published in newspapers and journals. The authors, scientists and industry workers, developed the theme of accelerated development of the chemical industry and sciences, with stress on the manufacture of synthetic fibers, plastics, and other materials. Some of the articles were abridged, revised, or enlarged. The articles were selected so as to give an adequate survey of the chemistry and technology of high-molecular-weight compounds and their use in industry, agriculture, and in the manufacture of consumer goods. Mentioned are materials for the production of polymers. This book belongs to the popular science series of the Academy of Sciences. Similar volumes are intended for future publication. No references are given.

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Shur, A.M. Unlimited Possibilities 295

AVAILABLE: Library of Congress

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6-1-58

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